Listing of the Pending Claims

The following lists the presently pending claims.

Claims 1-10 (canceled)

11.   (previously presented) A method for monitoring a control for an injection-molding process, the method comprising the steps of:

(a) acquiring, using the control, actual values of at least one process variable of the injection-molding process, the actual values of the at least one process variable comprising at least one selected from the group consisting of temperature, pressure, feed rate, and rotational speed; and

(b) transmitting the actual values of the at least one process variable to a computer for monitoring the control;

(c) evaluating the transmitted actual values,

(d) determining, based on the evaluated transmitted actual values, at least one setpoint value comprising at least one selected from the group consisting of temperature variations, pressure variations, feed rate variations, and rotational speed variations, and

(e) transmitting the at least one setpoint value to the control

wherein monitoring the control, evaluating the transmitted actual values and determining the at least one setpoint value are performed by the computer.

12.   (previously presented) The method according to claim 11, further comprising the step of receiving at the computer at least one input from an operator and sending the received at least one input to the control virtually in parallel with the execution of the monitoring of the injection-molding process.

13.   (previously presented) The method according to claim 11, further comprising the step of receiving at the computer at least one output from the control and sending the received at least one output to an operator virtually in parallel with the execution of the monitoring of an injection-molding process.

14.   (previously presented) The method according to claim 12, wherein receiving and sending the at least one input is executed by the computer under an operating system comprising non-real-time capabilities.

15.   (previously presented) The method according to claim 13, wherein receiving and sending the at least one output is executed by the computer under an operating system comprising non-real-time capabilities.

16.   (previously presented) The method according to claim 11, wherein the control comprises a software process, the software process executed by the computer under an operating system comprising real-time capability, the software process executing virtually in parallel with transmitting the actual values acquired by the control to the computer for monitoring.

17.   (previously presented) The method according to claim 11, wherein the monitoring is carried out using a computer program, the computer program executed on the computer.

18.   (previously presented) A system for controlling an injection-molding machine having an operator and comprising a plurality of sensors for transmitting actual values associated with an injection-molding process, the system comprising:

(a) a control for the injection-molding machine in communication with the plurality of sensors, the control having at least one input and at least one output, the transmitted actual values associated with the injection-molding process and received by the at least one input; and

(b) a computer in communication with the control and receiving the transmitted actual values associated with the injection-molding process from the at least one output associated with the control, wherein the computer evaluates and monitors the received actual values associated with the injection-molding process virtually in parallel with receiving at least one input from the operator and wherein the computer determines, based on the evaluated received actual values, at least one setpoint value for the injection-molding process.

19.   (previously presented) The system according to claim 18, wherein the at least one input receives the transmitted values in real time, and wherein the computer receives the transmitted values from the at least one output in real time.

20.   (previously presented) The system according to claim 18, wherein the computer is configured for receiving at least one operator input and for passing the at least one operator input to the control.

21.   (previously presented) The system according to claim 18, wherein the computer comprises a first computer program for monitoring the received values associated with the injection-molding process and a second computer program for sending at least one output received from the control to the operator, and wherein the second computer program sends at least one input received from the operator to the control.

22.   (previously presented) The system according to claim 21, wherein at least one of the first computer program and the second computer program run on a non-real-time operating system.

23.   (previously presented) The system according to claim 18, wherein the control comprises a real-time operating system.

24.   (canceled)

25.   (previously presented) A computer for controlling and monitoring an injection-molding machine having associated therewith a plurality of sensors for transmitting actual values of process variables associated with an injection-molding process, the transmitted actual values evaluated by the computer, the computer comprising:

      (a) a first computer program for executing a software process for controlling the injection-molding process; and

      (b) a second computer program for executing a monitoring procedure based on the transmitted actual values associated with the injection-molding process; and

(c) wherein the monitoring procedure and the software process are executed in parallel and

(d) wherein the computer, based on the evaluated transmitted actual values, determines and stores setpoint values for the process variables associated with the injection-molding process.

26.   (previously presented) The computer according to claim 25, wherein the computer has an operator, the computer further comprising a third computer program for sending at least one input received from the operator to the first computer program executing the software process.

27.   (previously presented) The computer according to claim 25, wherein the computer has an operator, the computer further comprising a third computer program for receiving from the first computer program at least one output for the operator.

28.   (previously presented) The computer according to claim 25, wherein the first and second computer programs are executed under an operating system having real-time capability.

29.   (previously presented) The computer according to claim 25, wherein the process variables associated with the injection-molding process comprise at least one of the group consisting of temperature, pressure, speed, and feed rate.

30.   (previously presented) The computer according to claim 25, wherein the setpoint values comprise at least one of the group consisting of temperature variations, pressure variations, and feed rate variations.

31.   (previously presented) A method of monitoring an injection-molding process associated with an injection-molding machine by utilizing a control, the control in communication with a plurality of sensors, the method comprising the steps of:
        (a) executing a monitoring procedure based on receiving actual data from the plurality of sensors; and

(b) receiving at the control virtually in parallel to executing the monitoring procedure at least one input from an operator; and

(c) wherein the monitoring procedure further comprises the step of evaluating the received actual data from the plurality of sensors and determining at least one setpoint value based on the evaluated received actual data from the plurality of sensors; and

(d) wherein the monitoring procedure is carried out by a computer associated with the control.

32.   (canceled)

33.   (previously presented) The method according to claim 31, further comprising the step of: (c) sending at least one output from the control to the operator virtually in parallel to executing the monitoring procedure.

34.   (previously presented) The method according to claim 31, wherein the actual data from the plurality of sensors comprises at least one of the group consisting of temperature, pressure, speed, and feed rate.

35.   (canceled)

36.   (previously presented) The method according to claim 31, wherein the determined at least one setpoint value is sent to the control.

37.   (previously presented) The method according to claim 36, wherein the at least one setpoint value comprises at least one of the group consisting of temperature variations, pressure variations, and feed rate variations.

38.   (previously presented) A control system for monitoring a control for an injection-molding machine, the control comprising:

(a) a plurality of sensors for sensing and transmitting actual values associated with the injection-molding process;

(b) a control in communication with the plurality of sensors;

(c) a computer in communication with the control, for monitoring the control, wherein

    i.   the transmitted actual values associated with the plurality of sensors are shared by both the control and the computer,

    ii.   the transmitted actual values are evaluated by the computer,

    iii.   at least one setpoint value is determined by the computer, based on the evaluated transmitted actual values, and

    iv.   the at least one setpoint value is transmitted by the computer to the control.

39.   (previously presented) The system according to claim 38, wherein the plurality of sensors are not dedicated solely for use with the computer.